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**From:** Brattin, Bill  
**Sent:** Wed 8/19/2015 4:52:50 PM  
**Subject:** Updated surface water and sediment graphs  
SW and Sediment Data 08-18-15 updated v4.xlsx

Kristen

Attached is a file with updated graphs for surface water and sediment.

Changes from the previous draft are as follows:

1. The data have been updated with a SCRIBE download from last night (8/18). The previous problem (data for total metals in SW were missing) has been corrected in SCRIBE and the SW graphs are now OK. SW data are available for after the 13<sup>th</sup> but they are not validated yet.
2. In both the surface water and the sediment graphs we have added a bar to show the average of background as well as the maximum for background. The average value is taken from the tables Weston sent that present the average value in the Animas near Durango.
3. In the sediment graphs we have plotted the PEC as a horizontal line.
4. The text labels for RBC and TVS in the surface water graphs have been corrected.
5. A new tab called TVS has been added that calculates the TVS as a function of hardness. This is because the values that we have shown to date are based on the mean hardness (197.2). Dan had previously mentioned that it might be better to have the values calculated at some lower hardness. The hardness data and the percentiles are shown on the tab. If you want to revise the TVS values to a lower hardness, enter the desired value into the cell in yellow (C6), and all the values should update.
6. In regard to the TVS values, here are a few things to note:
  - a. All the values are chronic.
  - b. The value for chromium is based on Cr(III). This is in accord with what Dan

recommended. However, it seems as if the State preference is to assume Cr(VI) if no speciation data are available to prove the chromium exists as Cr(III). The TVS for Cr(VI) is 11 (much lower than for Cr(III)).

c. The value for arsenic (150) is the value from the State TVS table, while the drainage-specific value is 100. Not sure which value you prefer. We have left the value at 150. If you want to use 100, simply enter this on the TVS tab.

d. The value for silver (1.0) shown previously is based on non-trout species. The value for trout is lower (0.24). We think the State (and dan??) recommend the trout value. We have made this change in the TVS tab. If you prefer to keep the non-trout value, the parameters are shown at the bottom of the TVS tab.

Please let me know if there any additional revisions you would like to implement.

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